European Journal of Internal Medicine 66 (2019) 99–101

Contents lists available at ScienceDirect

European Journal of Internal Medicine

journal homepage: www.elsevier.com/locate/ejim

Internal Medicine Flashcard

Sparse pustules and tenosynovitis in a young man

Ignacio Torres-Navarro*, Blanca de Unamuno-Bustos, Javier López-Davia

Dermatology Department, Hospital Universitario y Politécnico la Fe, 106 Fernando Abril Martorell Avenue, 46026, Valencia, Spain

1. Case description

A man in his 37 s consulted about a two-day-history of pustules on his both hands (Fig. 1A-C) and his right elbow (Fig. 1D). He complained also about edema, polyarthralgia with asymmetric small joint involvement and articular impairment in his hands. No other joints were affected. Furthermore, no other skin lesions were advised on clinical examination. He had no associated fever but generalized malaise.

Anamnesis revealed he had multiple sexual men partners in the previous 3 months, one was HIV positive.

Blood test revealed leukocytosis [17,00 × 10^3/μL (normal range: 3,50–10,50 × 10^3/μL), with 13,62 × 10^3/μL neutrophils (normal range: 1,9–7,3 × 10^3/μL)] and an elevated CRP [100,9 mg/L (normal range: 0–5 mg/L)] associating negative procalcitonin levels.

Swabs were taken on pustules and a biopsy of one pustule was performed. In addition, urogenital, rectal, and pharyngeal specimens, were submitted for microbiologic testing despite lack of symptoms at those sites. Two sets of blood cultures were obtained.

Ultrasonography revealed tenosynovitis involving the extensor muscles of his right hand.

2. What's your diagnosis?

Disseminated Gonococcal Infection (DGI).

3. Discussion

Nucleic acid amplification testing [1] of the pustule rendered a positive result for *Neisseria gonorrheae*. Also, histological findings revealed a broken pustule, associating perivascular neutrophilic infiltrate with fibrinoid necrosis (Fig. 1E) (infection-related leukocytoclastic vasculitis) [2]. This are diagnostic findings of DGI [1,2].

Patients with DGI may debut with the classical triad of tenosynovitis, dermatitis, and polyarthralgias without purulent arthritis ("arthritis-dermatitis syndrome") [2].

As our patient, history of prior symptomatic genital infection is generally uncommon. Despite several joints could be affected, typically depicts asymmetric joint involvement. Moreover, migratory arthralgias and tenosynovitis, both relatively common in DGI, are distinctive findings over other infectious arthritis [3].

Skin is often involved with painless, pustular or vesiculopustular lesions, which are mostly found on the distal extremities [2]. Usually, pustules last for only few days, even without treatment [2].

Septic arthritis, HBV, HIV, Syphilis, HSV, infective endocarditis, parvovirus B19, measles, rubella, and arboviral infections, have to be considered, as they can also cause rash and arthritis [2]. Albeit rare, early Lyme disease, Reactive arthritis, rheumatoid arthritis, psoriatic arthritis and Lupus arthritis, should be taken into account, especially for articular symptoms [3].

Treatment with parenteral therapy with ceftriaxone 1 g intravenously every 24 h for three days was established, and was completed with a seven-day course of oral cefixime (400 mg twice daily) plus one single dose of azithromycin 1 g orally [1–3], leading to complete, clinical and microbiological, restoration.

Funding sources

None.

Conflict of interests

None of the authors have any conflicts of interest to declare.

* Corresponding author.
E-mail address: ignaciotorresnavarro@gmail.com (I. Torres-Navarro).

https://doi.org/10.1016/j.ejim.2019.05.008
Received 26 March 2019; Accepted 13 May 2019
Available online 17 May 2019

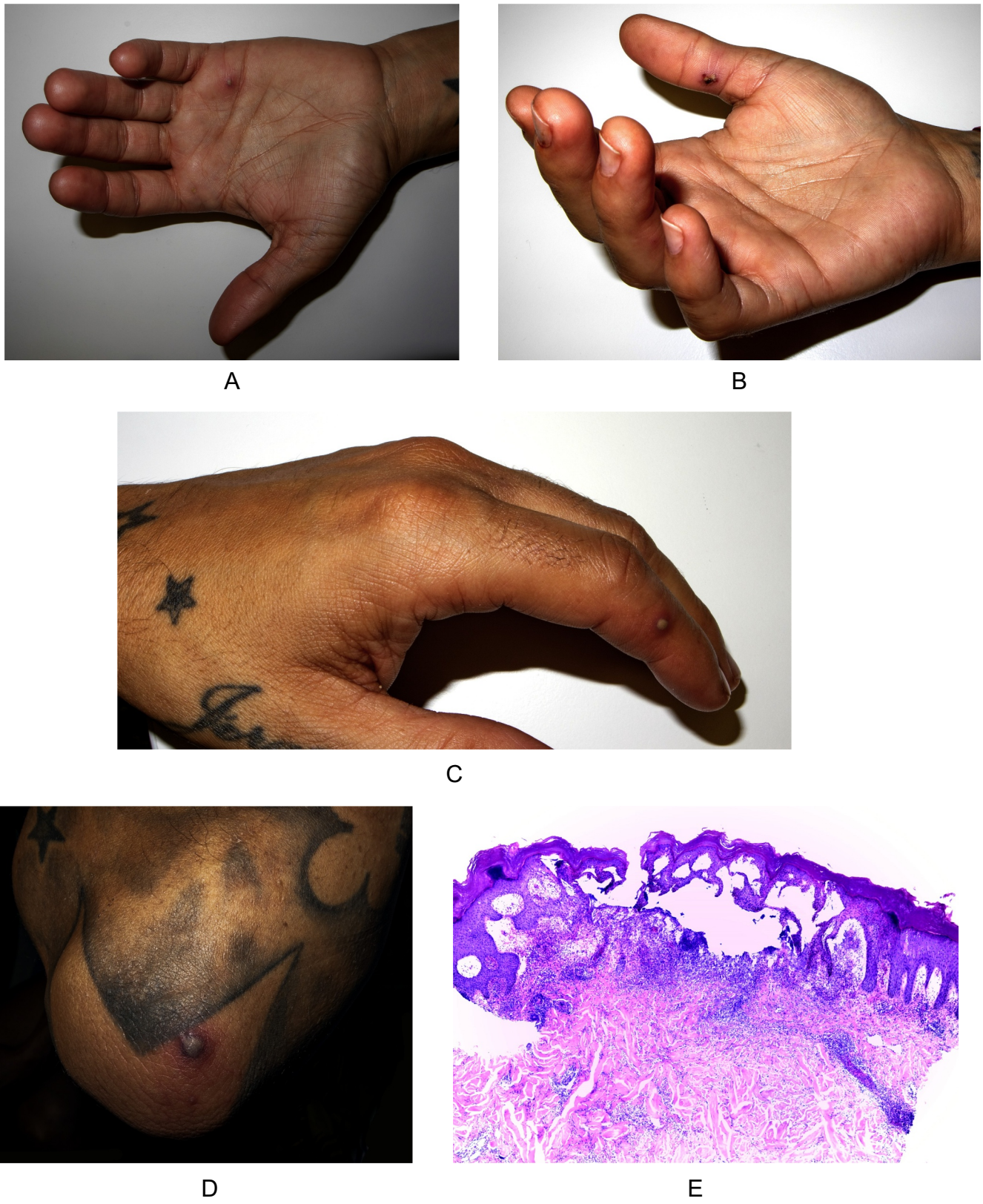

Fig. 1. Clinical (1A-D) and histological (1E) findings. Pustules on hands (1A-C) and elbow (1D). 1E, Biopsy (H/E ×4) revealing a broken pustule with dermal edema and dense perivascular infiltrate composed mostly of neutrophils.

References

[1] Centers for Disease Control and Prevention. Recommendations for the laboratory-based detection of *Chlamydia trachomatis* and Neisseria gonorrhoeae—2014. MMWR Recomm reports Morb Mortal Wkly report Recomm reports vol. 63 (RR-02). 2014. p. 1–19. https://doi.org/10.1016/j.biotechadv.2011.08.021. [Secreted].

[2] Beatrous SV, Grisoli SB, Riahi RR, Matherne RJ, Matherne RJ. Cutaneous manifestations of disseminated gonococcemia. Dermatol Online J 2017;23(1)http://www.ncbi.nlm.nih.gov/pubmed/28329470.

[3] García-De La Torre I, Nava-Zavala A. Gonococcal and nongonococcal arthritis. Rheum Dis Clin North Am 2009;35(1):63–73. https://doi.org/10.1016/j.rdc.2009.03.001.